



Response to Official Communication
Dec. 23, 2002

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Reference: Application No. 09/973095 Applicant: Jerry Chi Wang Date of Communication: 10/1/02
Title of Invention: Effluent Discharge System Facilitates Discharge of Sediments, and Powering of Underwater Machinery

2-11-03

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The applicant writes in response to the official communication dated 10/1/02 citing claim rejections. To further prosecute the application, the applicant submits the following responds.

A. Claims are amended as follows:

I claim:

1. An effluent discharge system for discharging water and sediments from dam or reservoir bottom comprising an intake conduit having its intake end disposed at the bottom of the reservoir and the intake port facing away from the dam wall, the connecting conduit which passes through the dam wall or the reservoir wall and is of air tight construction, a valve located at a convenient point in the conduit system for shut off, and a discharge conduit section which is on the down stream side of the dam wall and having its discharge end disposed at an elevation height sufficiently below the reservoir water level to avail adequate hydrostatic pressure at the system intake port to cause the inflow water to fluidize and entrain sediments along as the discharge water passing through the conduit system to discharge on the dam down stream side where the discharging sediments laden effluent water is either fed to a hydroelectric generator for power generation, or is discharged into an irrigation system for agricultural use.
2. An effluent discharge system according to claim 1 wherein the sediments laden discharge water is fed to a hydroelectric generator or multiple generators through direct piping connection or alternately is discharged into a main header for feeding to a single or multiple generators.
3. A movable hydraulic powered machinery system for use inside a dam or reservoir for performing under water mechanical work, such as dredging or mining, comprising:
 - a hydraulic powered dredge assembly consisting of a housing with a center common drive shaft onto which are fastened a fluid drive propeller unit and a dredge head, such that when the fluid flow turns the propeller drive unit, the drive shaft in turn turns the dredge head,
 - a conduit means for transport the water and entrained sediments to the dam down stream side comprising a flexible intake pipe section which runs between the fluid outlet of the dredge assembly and a stationery pipe fitting by the dam wall, a rigid pipe section passing through the dam wall, and a discharge pipe section

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